

REMARKS

Claims 1-34 are pending in this application. Claims 1-17 have been withdrawn as being directed to non-elected subject matter. Claims 18-24 have been amended. Claims 25-34 have been newly added.

Claims 18-24 have been amended for the sole reason of advancing prosecution. Applicants, by amending any claims herein, make no admission as to the validity of any rejection made by the Examiner against any of these claims. Applicants reserve the right to reassert the original claim scope of any claim amended herein, in a continuing application.

Claim 18 has been amended to recite “[a] sponge, comprising: a porous structure configured to absorb and hold at least 30% w/w aqueous solutions without dissolving or disintegrating; and a data transmitting module configured sufficient to transmit data indicative of one or more of sponge size and surface area of contact of the sponge with tissue of a subject.” Support for claim 18, as amended, can be found throughout the specification and claims as originally filed.

Claims 19-24 depend, either directly or indirectly, from claim 18. Claims 19-24 have each been amended to be in a form consistent with US practice.

Claim 25 has been newly added. New claim 25 is directed to “[t]he sponge according to claim 24, wherein the swellable hydrophilic-hydrophobic copolymer is a HEMA-methyl methacrylate copolymer.” Support for new claim 25 can be found throughout the specification and claims as originally filed.

Claim 26 has been newly added. New claim 26 is directed to "[t]he sponge according to claim 18, wherein the tissue is selected from the group consisting of skin tissue, eye tissue and mucosal tissue." Support for new claim 26 can be found throughout the specification and claims as originally filed.

Claim 27 has been newly added. New claim 27 is directed to "[t]he sponge according to claim 26, wherein the tissue is eye tissue." Support for new claim 27 can be found throughout the specification and claims as originally filed.

Claim 28 has been newly added. New claim 28 is directed to "[t]he The sponge according to claim 27, wherein the eye tissue is a selected from the group consisting of sclera tissue and cornea tissue." Support for new claim 28 can be found throughout the specification and claims as originally filed.

Claim 29 has been newly added. New claim 29 is directed to "[t]he sponge according to claim 18, further comprising a micro transmitter." Support for new claim 29 can be found throughout the specification and claims as originally filed.

Claim 30 has been newly added. New claim 30 is directed to "[t]he sponge according to claim 18, wherein the sponge is produced by copolymerizing hydroxyl methyl acrylate and ethylene glycol dimethacrylate." Support for new claim 30 can be found throughout the specification and claims as originally filed.

Claim 31 has been newly added. New claim 31 is directed to "[t]he sponge according to claim 18, wherein the sponge further comprises a charged drug." Support for new claim 31 can be found throughout the specification and claims as originally filed.

Claim 32 has been newly added. New claim 32 is directed to “[t]he sponge according to claim 31, wherein the drug is selected from the group consisting of an antibiotic, an antifungal agent, an anti-inflammatory agent, a water-soluble steroid, an anticancer agent and a local anesthetic.” Support for new claim 32 can be found throughout the specification and claims as originally filed.

Claim 33 has been newly added. New claim 33 is directed to “[t]he sponge according to claim 32, wherein the drug is an antibiotic.” Support for new claim 33 can be found throughout the specification and claims as originally filed.

Claim 34 has been newly added. New claim 34 is directed to “[t]he sponge according to claim 33, wherein the drug is gentamycin.” Support for new claim 34 can be found throughout the specification and claims as originally filed.

No new matter has been added.

In view of the remarks set forth below, further and favorable consideration is respectfully requested.

I. At page 2 of the Official Action, claim 18 has been rejected under 35 USC § 112, first paragraph as being indefinite.

The Examiner asserts that the phrase “and/or” in claim 18 renders it indefinite.

Applicants respectfully submit that this rejection has been obviated by the amendment to claim 18. More specifically, Applicants note that claim 18 now recites the term “and” rather than the phrase “and/or.” Therefore, Applicants respectfully submit that claim 18 is clear and definite within the meaning of 35 USC § 112, first paragraph. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw this rejection.

II. At page 2 of the Official Action, claims 21-24 have been rejected under 35 USC § 112 as being indefinite.

The Examiner asserts that the phrase “such as,” recited in claim 21-24, renders the claims indefinite.

Applicants respectfully submit that this rejection has been obviated by the amendments to claim 21-24. More specifically, Applicants note that claims 21-24 no longer recite the term “such as,” and where applicable have been placed in proper Markush form. Therefore, Applicants respectfully submit that claims 21-24 are clear and definite within the meaning of 35 USC § 112, first paragraph. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw this rejection.

III. At pages 3-4 of the Official Action, claims 18-24 have been rejected under 35 USC § 103 as being unpatentable over various combinations of Kaneko et al. (US Patent No. 4,298,120) either alone, or, in view of one or more of Suzuki (US Patent No. 4,477,626), Meyer (US Patent No. 4,148,318) and Nicolais et al. (US Patent No. 5,645,592).

The Examiner asserts that either taken alone, or in combination, Kaneko et al. in view of Suzuki, Meyer or Nicolais et al. render the present subject matter obvious.

In view of the following these rejections are respectfully traversed.

To establish a *prima facie* case of obviousness, the Examiner must satisfy three requirements. First, as the U.S. Supreme Court very recently held in *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398 (2007), “a court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions. ...it [may] be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the

marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. ...it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does... because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known." (KSR, 550 U.S. 398 at 417.) Second, the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *Amgen Inc. v. Chugai Pharm. Co.*, 18 USPQ2d 1016, 1023 (Fed. Cir. 1991). Lastly, the prior art references must teach or suggest all the limitations of the claims. *In re Wilson*, 165 USPQ 494, 496 (C.C.P.A. 1970).

As discussed, claim 18 is directed to a sponge, comprising: a porous structure configured to absorb and hold at least 30% w/w aqueous solutions without dissolving or disintegrating; and a data transmitting module configured sufficient to transmit data indicative of one or more of sponge size and surface area of contact of the sponge with tissue of a subject. Claims 19-24 depend, either directly or indirectly, from claim 18.

In contrast to the presently pending subject matter Kaneko et al. is directed to a chip-like electronic component series having a tape-like member formed with a plurality of apertures arranged in the longitudinal direction. See Kaneko et al. at the abstract.

However, unlike the presently claimed subject matter, Kaneko et al. do not teach or suggest **a data transmitting module configured sufficient to transmit data**

indicative of one or more of sponge size and surface area of contact of the sponge with tissue of a subject, as recited in claim 18. In this regard, Applicants politely note that Kaneko et al. is in a completely different area of art. In this regard, Kaneko et al. describe a series of chip-like electronic components which may be readily mounted on a print circuit board. Kaneko et al. merely describe that the "chip-like" electronic component shown is to be carried on a sponge sheet (48). See Kaneko et al. at column, 10 lines 13-29, and in figure 12. As described in Kaneko et al.:

...these components are absorbed by virtue of construction of the sponge sheet 48, the difference absorbing capacity of the sponge sheet 48 need not be so large and therefore the sponge sheet 48 need not be so thick.... See Kaneko et al. at column 10, lines 35-40.

The sponge sheet plainly absorbs the different thicknesses of these components (1a, 1b, 1c).

The chip in Kaneko et al. is carried on the sponge sheet ***as a protective measure*** until it is inserted to the circuit board. Applicants respectfully submit that until such time that the chip is inserted into the circuit board it is neither operable nor capable of performing any function at all. As evidence of the aforementioned, Applicants politely note the following passage referring to figure 2, which indicates that:

... a chip-like electronic component 1 is depressed downward...until the lower tape 74 [having the sponge layer 48 carried on top] is broken and the chip-like electronic component 1 is pushed downward. The chip-like electronic component 1 as thus pushed downward is guided by a guiding member 83 to be placed on a suitable print circuit board 84.

Based on the aforementioned, Applicants submit that the chip breaks though the sponge sheet and cannot be deemed as capable of transmitting data indicative of the sponge's size or surface area of contact of the sponge with a tissue. Accordingly,

Applicants submit that the sponge of Kaneko et al. is does not comprise ***a data transmitting module configured sufficient to transmit data indicative of one or more of sponge size and surface area of contact of the sponge with tissue of a subject***, as recited in claim 18.

Applicants note that the Examiner should have at least stated how Kaneko et al. can be scaled up to meet the structural attributes recited therein.

In addition, Applicants submit that Kaneko et al. do not teach or suggest absorbing and holding at least 30% w/w aqueous solutions without dissolving or disintegrating, as recited in present claim 18. With specific regard to the Examiner's assertion at item 9 of the Official Action, i.e., that the ability to absorb and hold at least 30% w/w aqueous solution is allegedly obvious because discovering an "optimum value of a result effective variable involves only routine skill," Applicants note that the presently claimed parameter of absorption of at least 30% w/w aqueous solutions without dissolving or disintegrating is not the same as any absorbion parameter taught or suggested in Kaneko et al. In this regard, Applicants submit that the only thing remotely close to an absorbion parameter described in Kaneko et al. is merely elasticity with respect to the varying size of the chip-like components, which the sponge sheet carries. Applicants submit that this is completely different from the property of liquid absorbance, let alone absorbance of water-based solutions, as recited in claim 18. In view of the absence of a liquid absorbance parameter in Kaneko et al., Applicants submit that the Examiner's assertion that the present subject matter is an optimization of a parameter in the cited art is without merit. Applicants note that a particular

parameter must first be recognized as a result-effective variable, i.e., a variable which achieves the claimed subject matter, prior to selecting it for optimization.

Applicants note that it appears that the Examiner's conclusions regarding the present subject matter could only be the result of impermissible hindsight. In this regard, Applicants note that a skilled artisan would not seek to optimize the absorbance of an aqueous solution of a sponge, based on Kaneko et al., without the incentive which arises from the structural elements recited in claim 18. Therefore, Applicants submit that Kaneko et al. do not teach or suggest each and every element of the presently claimed subject matter, as required by *In re Wilson*.

Suzuki does not remedy the deficiencies of Kaneko et al. In contrast to the presently claimed subject matter, Suzuki is directed to a curable liquid composition comprising a vinyl-containing polyorganosiloxane, a polyorganosiloxane containing at least two silicon-bonded hydrogen atoms per molecule, a platinum-containing catalyst and a finely divided silica filler by including in said composition from 0.05 to 10%, based on the weight of said composition and a polyorganosiloxane, wherein each molecule contains at least 0.5% by weight of hydroxyl groups. See Suzuki at the abstract. However, like Kaneko et al. Suzuki does not teach or suggest ***a data transmitting module configured sufficient to transmit data indicative of one or more of sponge size and surface area of contact of the sponge with tissue of a subject***, as recited in claim 18. Additionally, Suzuki does not teach or suggest absorbing and holding at least 30% w/w aqueous solutions without dissolving or disintegrating, as recited in present claim 18. Accordingly, whether taken alone, or in combination, none of the

cited references teach or suggest every element of the presently claimed subject matter, as required by *In re Wilson*.

Meyer does not remedy the deficiencies of Kaneko et al. and Suzuki. Meyer is directed to a tool for surgical preparations. The tool according to Meyer has an antiseptic solution contained in a reservoir thereof by a frangible cover and means affixed to a sponge integral to the tool for piercing the cover to release the solution into the sponge. See Meyer at the abstract. However, like Suzuki and Kaneko et al., Meyer does not teach or suggest **a data transmitting module configured sufficient to transmit data indicative of one or more of sponge size and surface area of contact of the sponge with tissue of a subject**, as recited in claim 18. Additionally, Meyer does not teach or suggest absorbing and holding at least 30% w/w aqueous solutions without dissolving or disintegrating, as recited in present claim 18. Accordingly, whether taken alone, or in combination, none of the cited references teach or suggest every element of the presently claimed subject matter, as required by *In re Wilson*.

Nicolais et al. do not remedy the deficiencies of Kaneko et al., Suzuki and Meyer. In contrast to the present subject matter, Nicolais et al. is directed to orthopedic fasteners and replacements including, for example, nails, screws, pins, hip and knee replacements, etc., coated with hydrogels and other biocompatible/biodegradable materials. See Nicolais et al. at the abstract. However, like Suzuki, Kaneko et al. and Meyer, Nicolais et al. do not teach or suggest **a data transmitting module configured sufficient to transmit data indicative of one or more of sponge size and surface area of contact of the sponge with tissue of a subject**, as recited in claim 18. Additionally, Nicolais et al. do not teach or suggest absorbing and holding at least 30%

w/w aqueous solutions without dissolving or disintegrating, as recited in present claim 18. Accordingly, whether taken alone, or in combination, none of the cited references teach or suggest every element of the presently claimed subject matter, as required by *In re Wilson*.

In view of the foregoing, it is submitted that nothing in the cited references, whether taken alone, or together, render the claimed invention obvious within the meaning of 35 USC § 103. Accordingly, the Examiner is respectfully requested to withdraw this rejection.

IV. New Claims 25-34

Claims 25-34 have been newly added. Each of new claims 25-34 are discussed in the remarks section above. The discussion of new claims 25-34 is incorporated herein by reference.

Applicants respectfully submit that new claims 25-34 are both novel and non-obvious. Accordingly, Applicants respectfully request an indication that all of the pending claims are now allowable.

CONCLUSION

In view of the foregoing, Applicants submit that the application is in condition for immediate allowance. Early notice to that effect is earnestly solicited. The Examiner is invited to contact the undersigned attorney if it is believed that such contact will expedite the prosecution of the application.

In the event this paper is not timely filed, Applicants petition for an appropriate extension of time. Please charge any fee deficiency or credit any overpayment to Deposit Account No. 14-0112.

Respectfully submitted,

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A handwritten signature in black ink, appearing to be 'G. Nath', written over a horizontal line.

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